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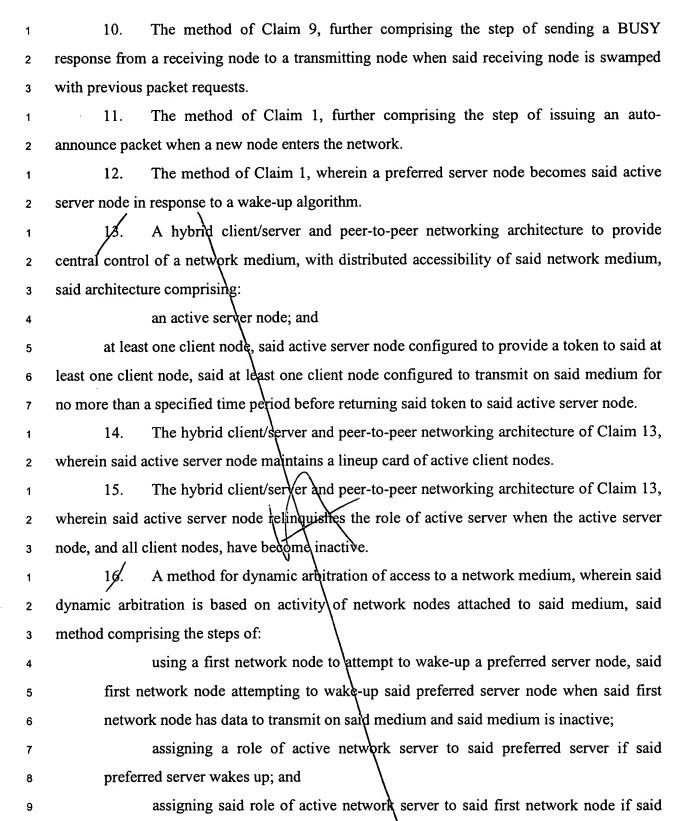
A method for arbitrating use of a network medium to avoid collisions caused by multiple nodes attempting to transmit data on the network medium at the same time, said method comprising the steps of:

listening to a network medium to determine if said medium is active or inactive;

establishing an active network server if said medium is inactive; and using centralized token passing for access to a said medium when said medium is active, said centralized token passing controlled by said active network server.

- 2. The method of Claim 1, wherein said active network server maintains a lineup card that lists one or more active client nodes.
- 3. The method of Claim 1, wherein said active network server passes a token to a selected client node, said selected client node being one of said one or more active client nodes listed on said lineup card.
 - 4. The method of Claim 3, wherein said selected node is allowed to transmit data on said network medium only when said selected node has said token.
 - 5. The method of Claim 3, wherein said selected node is removed from said lineup card when said node has been inactive for a period of time.
 - 6. The method of Claim 3, wherein a new client node requests insertion on said lineup card by using spitting on the bus algorithm.
 - 7. The method of Claim 1, wherein a presence of said datagram is detected by matching a specified preamble and length sequence.
 - 8. The method of Claim 1, wherein access to said medium is provided by a media access control layer.
- 9. The method of Claim 8, wherein said media access control layer provides control structures to implement a spare receive buffer large enough to hold a Media Access Control Header.

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preferred server node fails to wake-up.

A data network comprising:

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2		a network medium;
3		active server means for maintaining a list of active client nodes and arbitrating
4	access	to said medium, said active server means providing a token;
5		client node means for receiving said token from said active server means.
1	18.	The data network of Claim 17, wherein said client node means comprises a
2	smart node.	
1	19.	The data network of Claim 17, wherein said client node means comprises a
2	dumb node.	
1	20.	The data network of Claim 17, wherein said client node means becomes an
2	active client n	ode by spitting on the bus.
1	21.	The data network of Claim 17, wherein said network medium is a power line.
1	22.	The data network of Claim 17, wherein said list of active client nodes
2	comprises a li	neup card.
1	23.	The data network of Claim 17, wherein each of said active nodes in said list of
2	active nodes a	re prioritized based on a type of data carried by each node.
1	24.	The data network of Claim 23, wherein said list of nodes allows for a
2	maximum nu	mber of nodes to be listed, said list configured to remove a first node that
3	communicates	s data having a relatively lower priority in order to make room for a second node
4	that carries da	ta having a relatively higher priority.
1	25.	A network node coupled to a network, said node comprising:
. 2	,	a processor;
3		a memory operatively coupled to said processor; and
4		a protocol program loaded in said memory, said program configured to:
5		announce a presence of said node on said network;
6		request access to a network medium;
7		receive a token from a server node;
8		hold said token;
9		transmit data on said network while holding said token; and
10		return said token to said server node within a specified period of time.

- 1 26. The network node of Claim 25, wherein said network medium is a power line
- 2 medium and said network node provides streaming data across said power line medium.
- 1 27. The network node of Claim 26, wherein said multimedia data comprises voice
- 2 data.